

PTC'DC 26

September 17, 2026

OPENING REMARKS



Bill Barney

Vice Chair, PTC Board of Governors
Chairman, Asian Century Equity



Jensen Huang
Founder and CEO, Nvidia

“AI is no longer a single breakthrough or application – it is essential infrastructure. Every company will use it. Every nation will build it. From energy and chips to infrastructure, models and applications, every layer of the stack is advancing at once...”



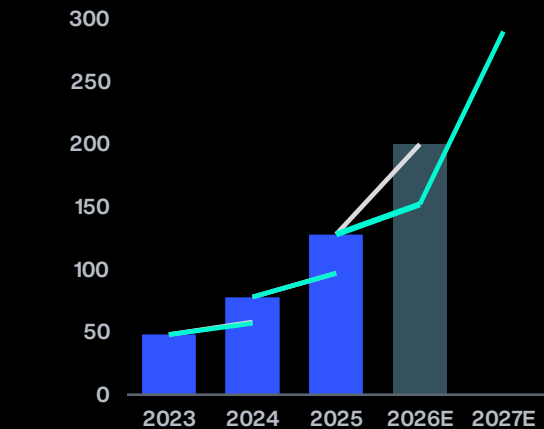
Analyst Forecasts Have Trailed Actual CapEx Every Year Since 2023, With 2026 Guidance Up 56-119% YoY Across the Big Four



Amazon

Total CapEx investment (\$B)

Actual CapEx Current '26 estimate
Mgmt forecast Analyst forecast

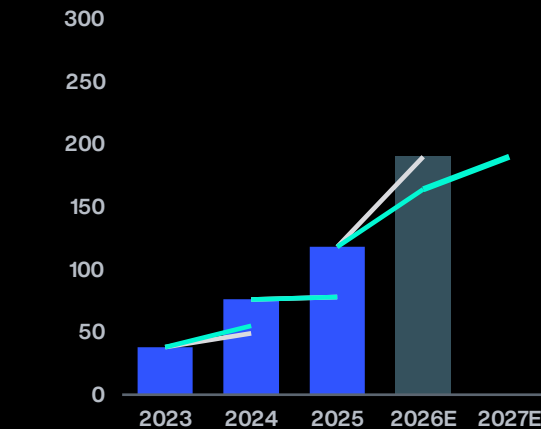


YoY growth (%)	-	62	65	56	90
Analyst forecast date	Nov '23	Dec '24	Dec '25	Jun '26	-

Microsoft

Total CapEx investment (\$B)

Actual CapEx Current '26 estimate
Mgmt forecast Analyst forecast

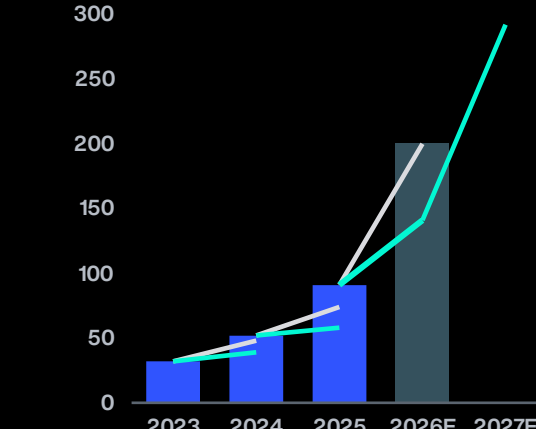


YoY growth (%)	-	100	55	61	16
Analyst forecast date	Nov '23	Nov '24	Nov '25	Apr '26	-

Google

Total CapEx investment (\$B)

Actual CapEx Current '26 estimate
Mgmt forecast Analyst forecast



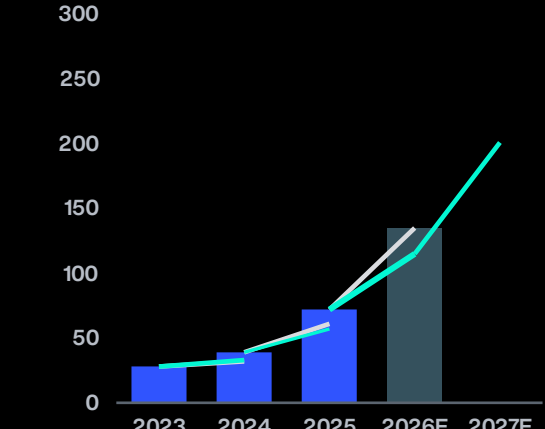
YoY growth (%)	-	63	74	119	107
Analyst forecast date	Oct '23	Nov '24	Dec '25	May '26	-

Meta

As of July 2026

Total CapEx investment (\$B)

Actual CapEx Current '26 estimate
Mgmt forecast Analyst forecast



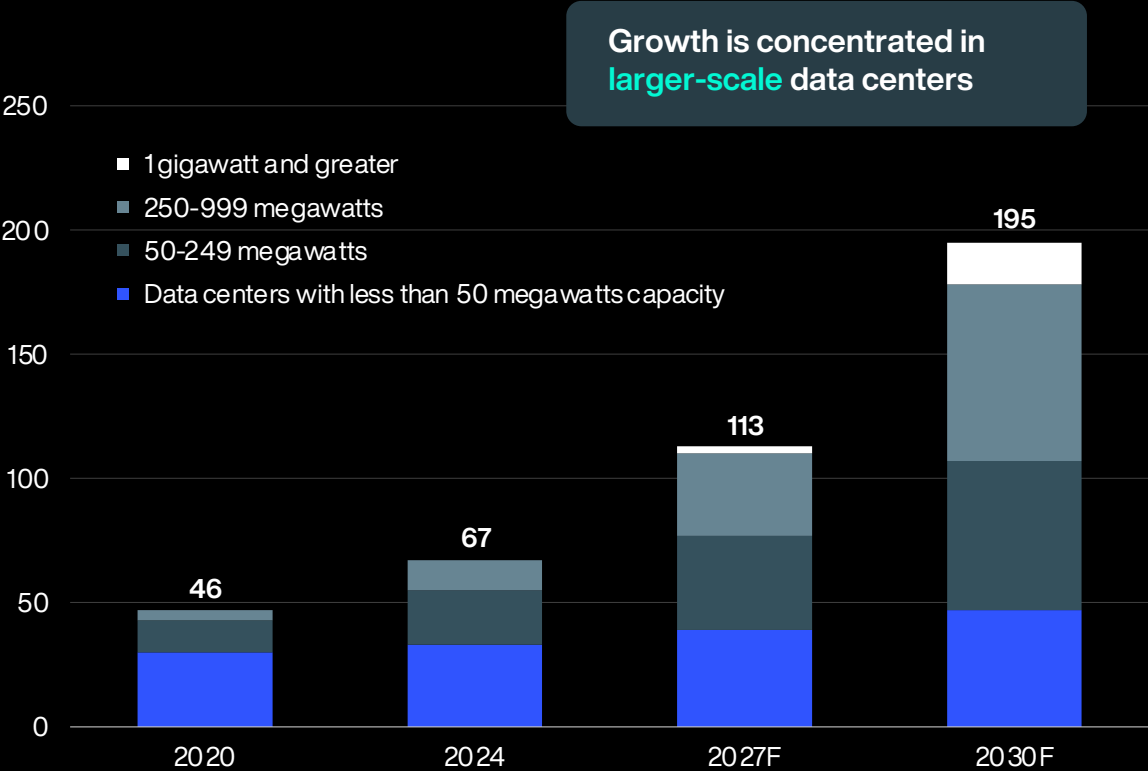
YoY growth (%)	-	40	84	87	75
Analyst forecast date	Oct '23	Oct '24	Dec '25	Apr '26	-

Note: 1) Microsoft shown on a calendar-year basis, thus calendar figures differ from reported fiscal-year filings (which end in June) and its 2026 guidance reflects its April 2026 (Q3 FY26) earnings call; Midpoints shown where ranges were given; Amazon figures are net of proceeds through 2025, while 2026 guidance is gross/total; Meta figures include finance-lease principal payments; Analyst forecasts from JP Morgan
Source: Company filings & publications; JP Morgan

The Buildout Is Getting Bigger and More AI-Intensive

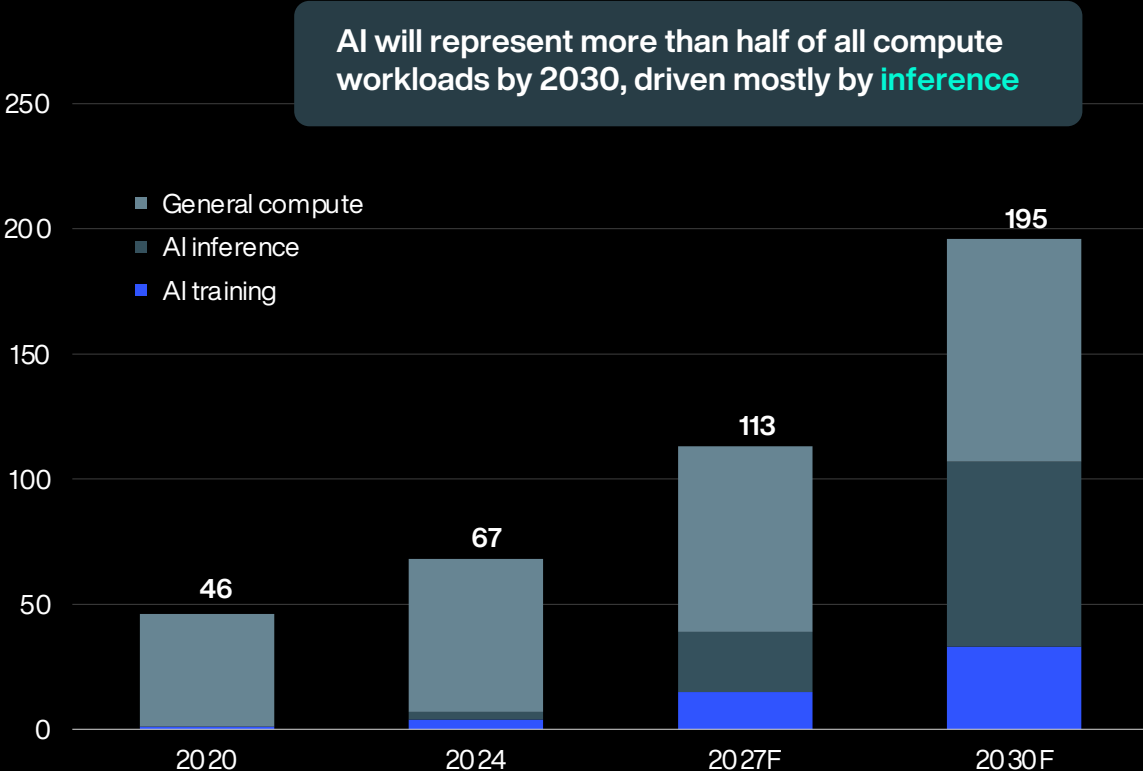


Global Data Center Capacity by Size (Gigawatts)



Notes: Assumes baseline scenario of sector growth; values are rounded
Source: Bain Data Center Model, January 2026

Global Data Center Capacity by Compute Type (Gigawatts)



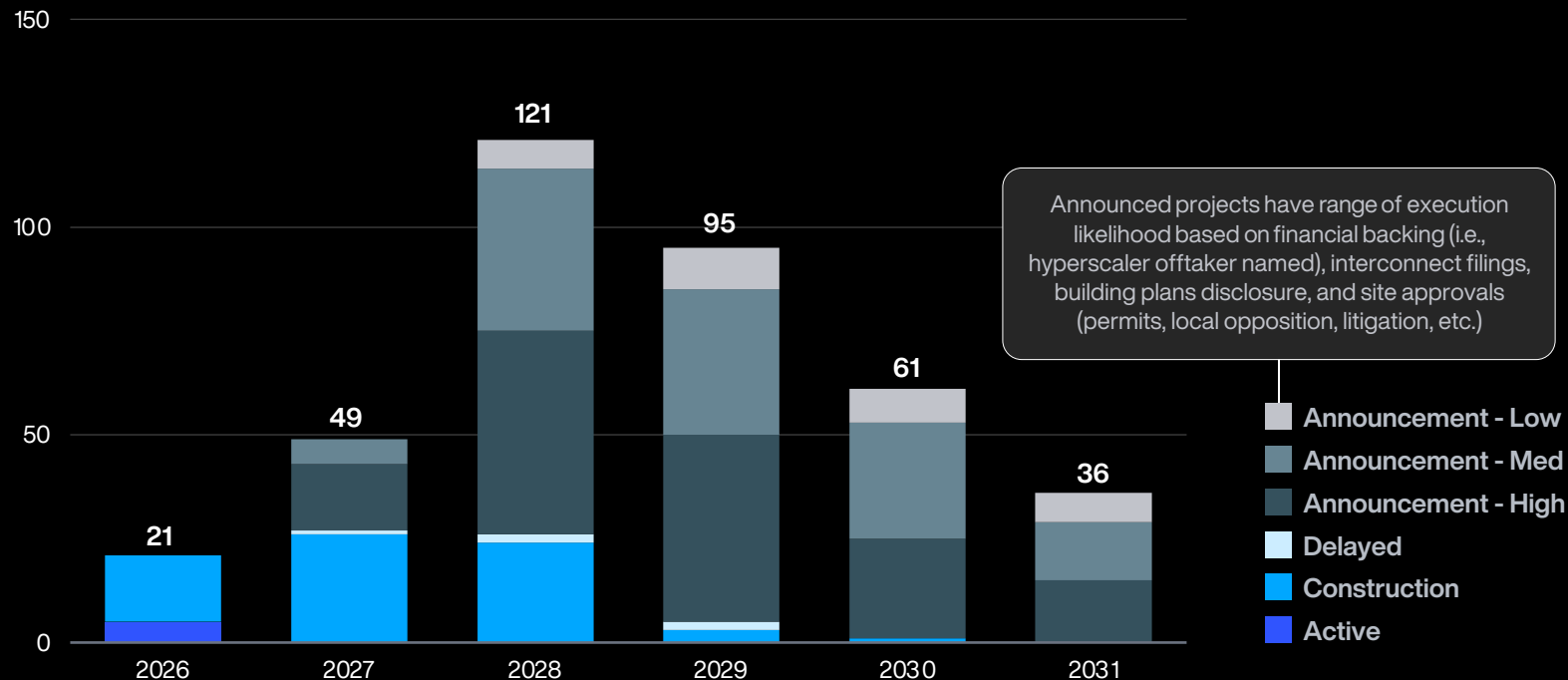
Notes: Assumes baseline scenario of sector growth; values are rounded
Source: Bain Data Center Model, January 2026

Near-Term North America Capacity Is Construction-Backed Through 2028; Beyond That the Pipeline Is Almost Entirely Announcements and Visibility Drops Sharply



North America pipeline by project status: construction-backed near term, announcement-based beyond 2028 pipeline shifts to paper

North America Announced Data Centers by project status and expected completion date
Aterio tracker (Total Facility, GW)



Source: Aterio (July 2026)

The pipeline thins after 2028

- Near-term delivery capacity (2026–2027) is dominated by projects already active or under construction, tracked via satellite by Aterio
- Capacity under construction (~20%) is likely to come online regardless of demand status
- Hyperscalers have the most ‘secured’ capacity of the builders, with ~40% of projected under construction as of today
- 2028 is the inflection point where construction-backed volume falls back, declining outer-year totals reflect limited visibility, not weaker demand

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THE DEMAND SHOCK

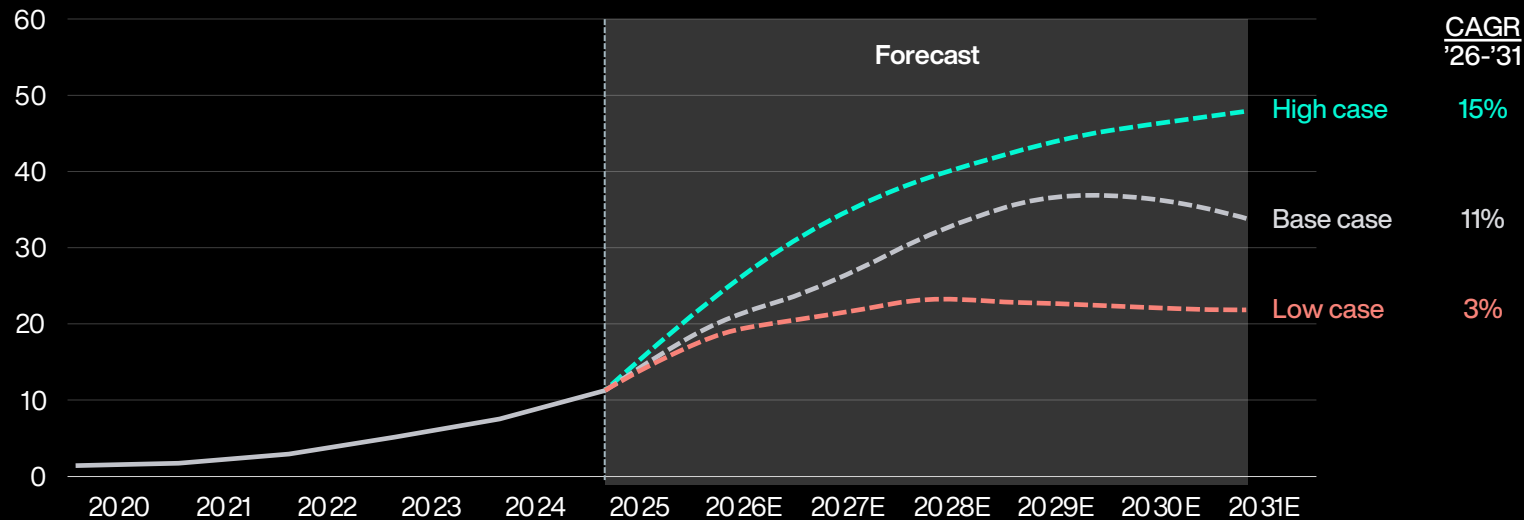
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New-Build Capacity Diverges by Scenario, With High Case Sustaining Large-Scale AI Development Into 2031



Base case new builds peak around 2029–2030 as buffer-rebuild phase completes, then normalize; high case sustains growth through 2031

IT Capacity, New Additions, Global (GW)



High case – Full throttle buildout:

New-build capacity accelerates through the late 2020s, peaking above 50 GW annually around 2030 before moderating, as the installed base reaches a scale where incremental additions represent a smaller share of total capacity.

Base case – Demand-backed, supply-paced:

New builds peak around 2029–2030, completing the catch-up phase in which hyperscalers rebuild compute reserves depleted in 2024–2025. Post-peak, annual additions settle to a cadence aligned to actual AI compute consumption (with range of possible outcomes post 2031)

Low case – Friction-limited growth:

Annual additions rise throughout the window without peaking, slower development as less broad AI adoption, slower enterprise monetization, and persistent supply-chain constraints keep the pace of new builds below the level required to satisfy higher-case demand

“Compute is the canvas on which everything else gets built. It is the lifeblood of our business.”

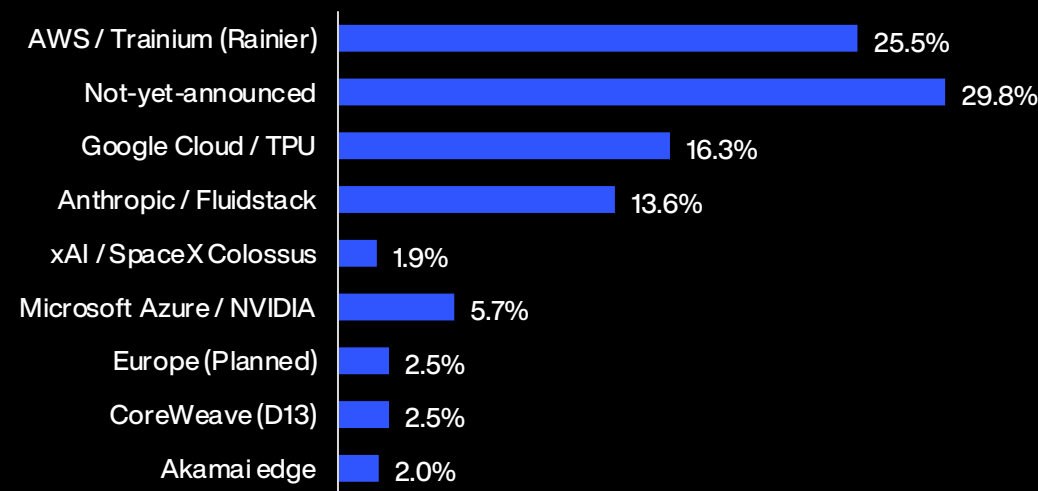
Krishna Rao
CFO, Anthropic



Two Companies Will Drive the Majority of the Investment With Two Different Partnership Models



Anthropic: deliberate diversification across 9 suppliers



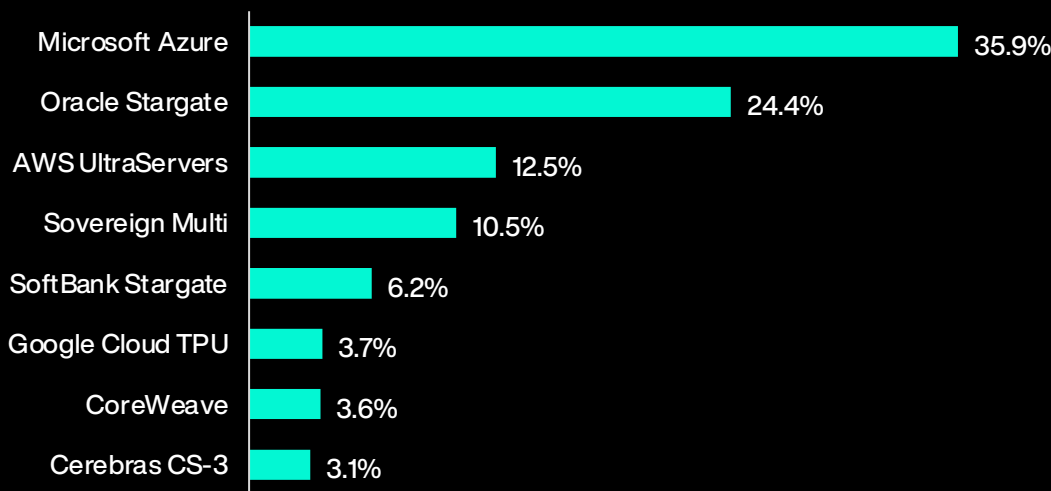
25.5%

largest single supplier (AWS Rainier) – no vendor dominates

Three principles in the data: no exclusivity, ever; chip-vendor independence (proven training on NVIDIA, TPU and Trainium); and Anthropic-controlled real estate – ~14% via the \$50B Fluidstack-captive program.

The 3.8 GW "Not-yet-announced" placeholder (24% of the stack) is the forecast's most conditional element.

OpenAI: consolidation around Microsoft + Stargate



60%

on Microsoft Azure + the Oracle/SoftBank Stargate complex alone

Where Anthropic prizes independence, OpenAI is structurally NVIDIA-dependent and owns no real estate. The Stargate complex alone is 41% of 2030 offtake.

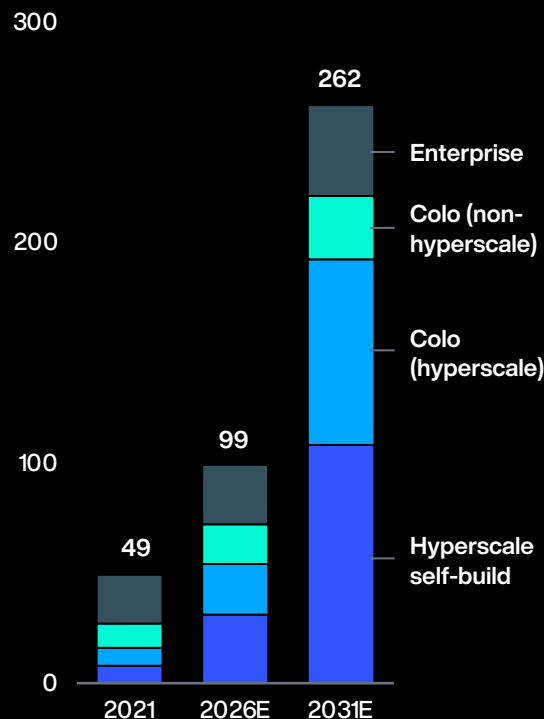
A \$238B / 16 GW chip-vendor LOI overhang (NVIDIA, AMD, Broadcom) is netted out – added back to the 24.1GW net it grosses to 40.1GW, double-counting capacity already sited elsewhere.

AI Is Reshaping Who Builds, What Gets Built, Where It Gets Built, and How Big It Gets



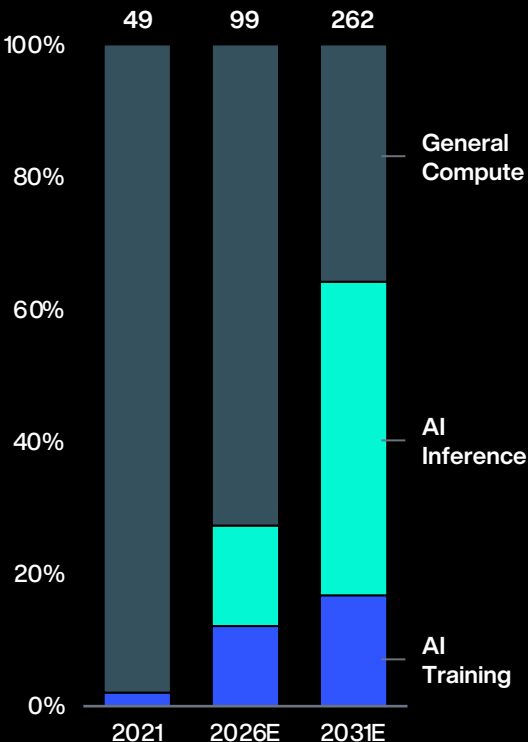
Data center type

Data Center Critical IT Capacity (GW)
Bain 2026 DC Outlook (Base case)



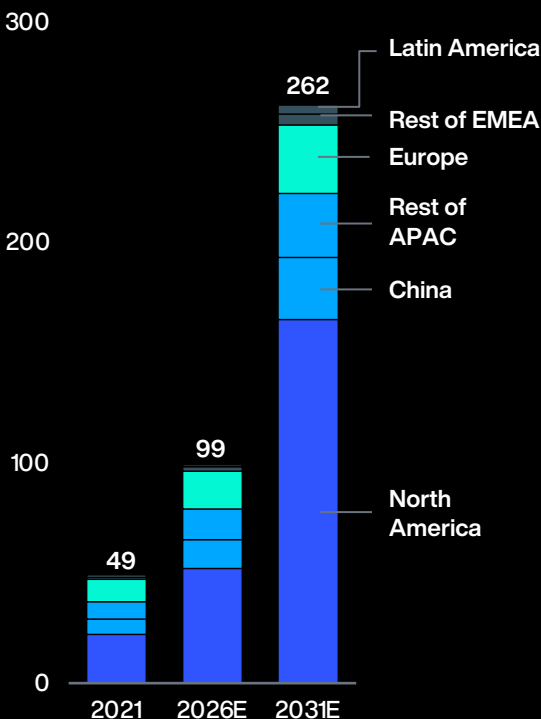
AI use case

AI Data Center IT Capacity (GW)
Bain 2026 DC Outlook (Base case)



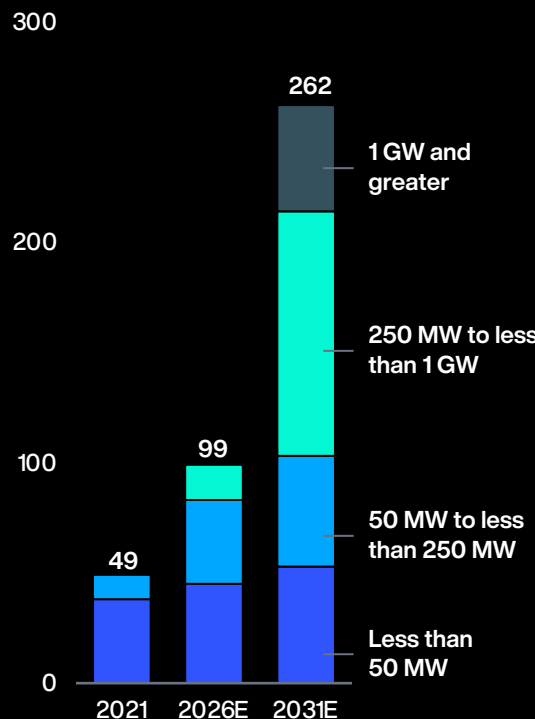
Geography

Critical IT capacity by region (GW)
Bain 2026 DC Outlook (Base case)



Data center size

Data Center Critical IT Capacity (GW)
Bain 2026 DC Outlook (Base case)



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THE INFRASTRUCTURE ARMS RACE

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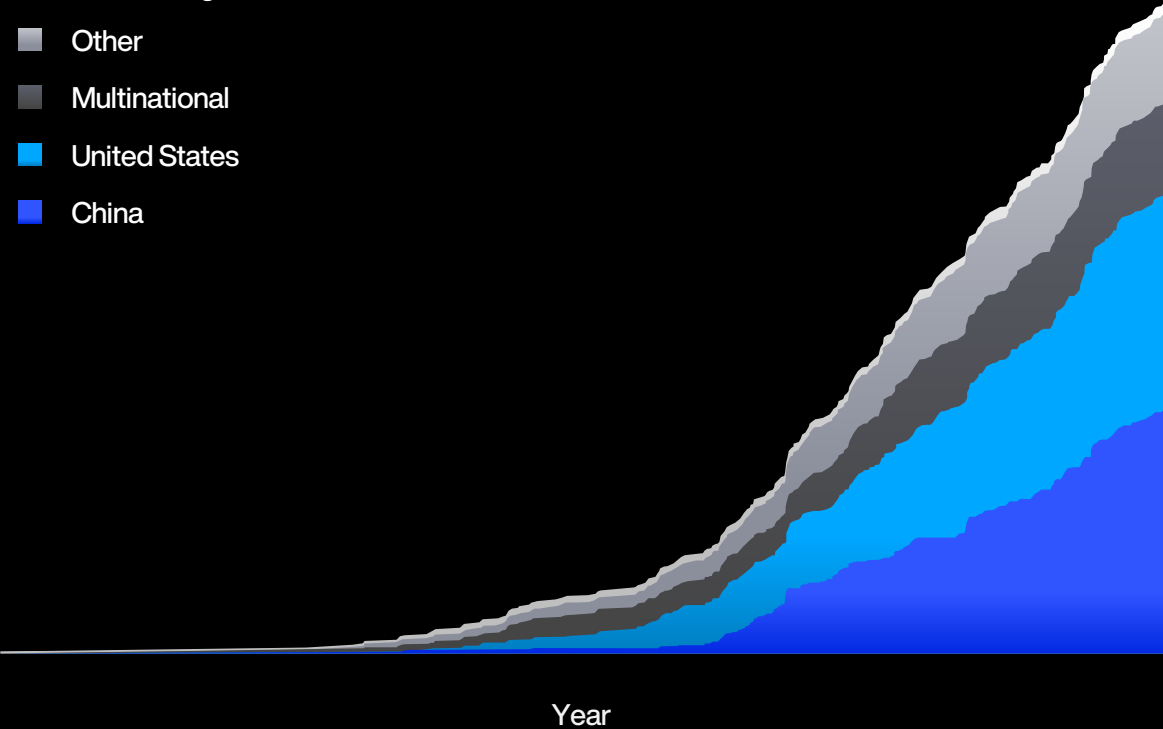
The New Arms Race: National Sovereignty Through AI Leadership



Large-scale models by country

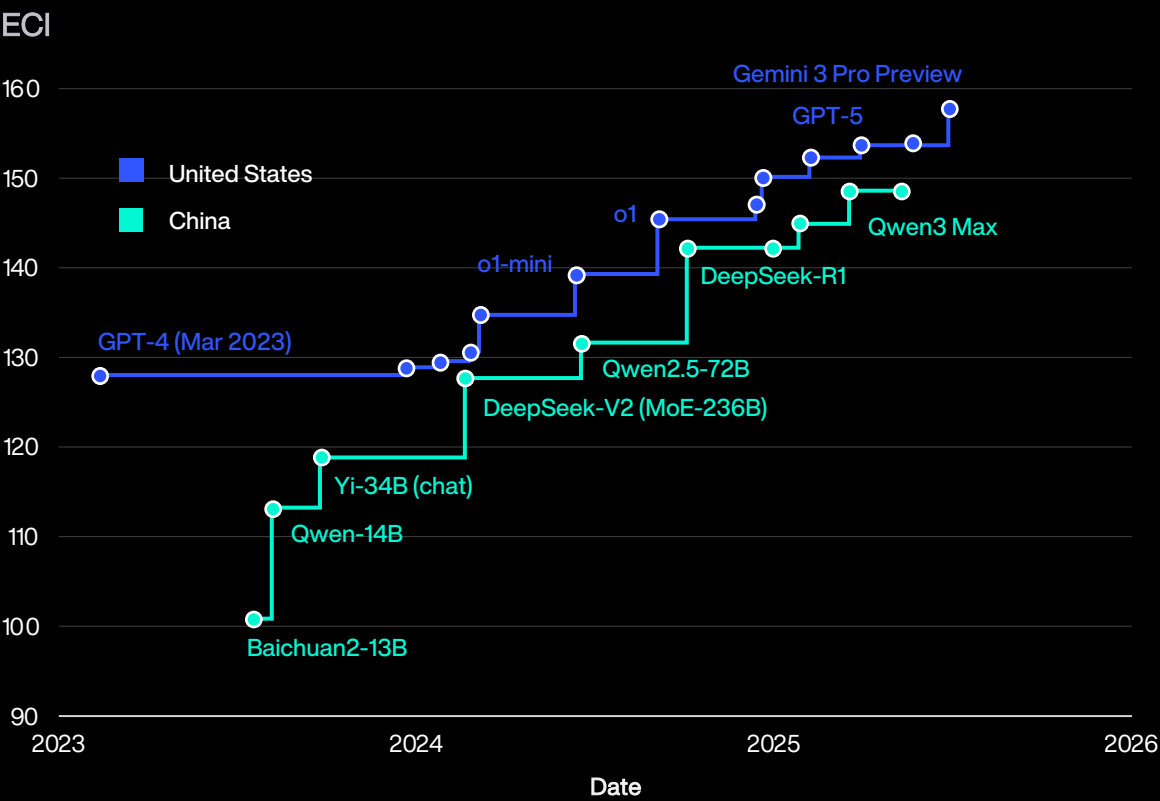
Cumulative number of models

- United Kingdom
- Other
- Multinational
- United States
- China



Source: epoch.ai

Chinese AI Models Have Lagged the US Frontier by 7 Months on Average Since 2023



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TRAINING, INFERENCE, AND THE EDGE

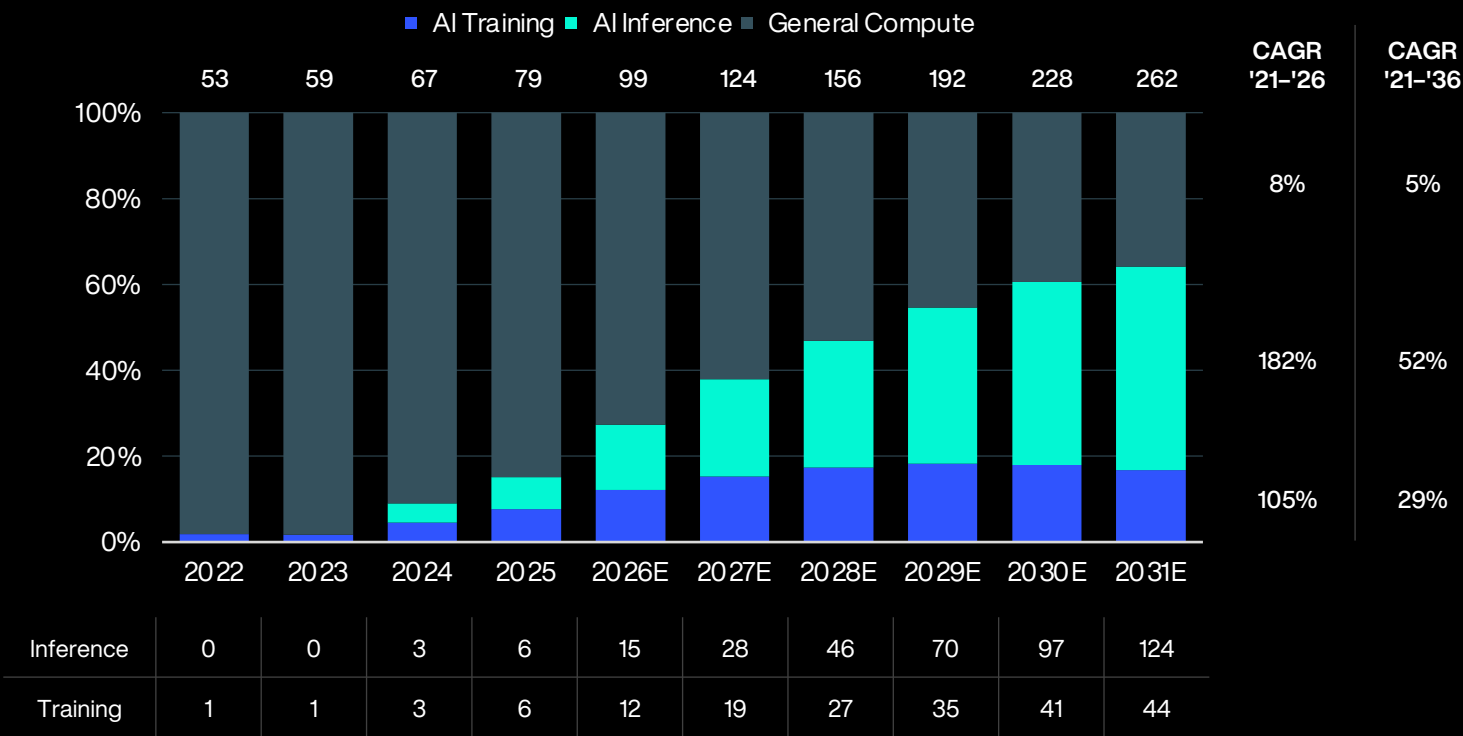
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Inference Is Projected to Account for an Increasing Proportion of AI-Dedicated IT Capacity as Inference Use Cases Increase and as Training Becomes More Efficient



Inference is expected to outpace training and general compute growth

Global AI Data Center IT Capacity (GW) – Bain 2026 DC Outlook (Base case)



Commentary

- **The acceleration of model development is enabling faster deployment**, significantly increasing volume of real-world inference workloads
- **Declining inference costs are lowering the barrier to widespread applications of AI**, accelerating the shift towards deployment
- **Purpose-built hardware for inference**, like NVIDIA's latest GPU architectures, is **rapidly scaling** to support the growing demand for high-throughput, low-latency AI deployments
 - NVIDIA's Vera Rubin platform entered full production in June 2026 with partner availability from H2, claiming ~5x inference performance over Blackwell and 35x inference performance per watt on NVL72 (liquid cooled)
- **Training capacity will continue to scale in next few years** as model sizes and datasets expand for frontier model acceleration; infrastructure is then able to be repurposed as frontier models evolve over time

Same Chip Family – and Almost Nothing Else in Common



	Training	Inference
Power Profile	Steady-state full-load for 60-180-day runs, so peak equals average. Behind-the-meter generation can be sized exactly to the run, and a brief outage just extends the schedule rather than losing revenue.	Spiky and diurnal, with 3-5x peak-to-trough swings that track user activity. It needs grid headroom plus battery buffering - PUE and load management matter far more than raw peak capacity.
Site Footprint	A single massive campus of 300-5,000 MW, with every GPU on one InfiniBand fabric – one site is effectively one model. Scale and tight coupling beat location, so the build is monolithic.	Many small sites of 5-50 MW each, distributed across regions. Each PoP serves local users at <100ms latency, and capacity is added region-by-region as demand appears rather than in one giant pour.
Geographic Preference	Cheap power anywhere wins – ERCOT, MISO, Nordic hydro. Saudi PIF. Latency to the user is irrelevant, so siting simply follows the lowest electricity cost and the fastest interconnect queue.	Built near users – major metros (NYC, London, Tokyo, Mumbai), sovereign zones, edge PoPs in 130+ countries. Proximity, not power price, drives the map, and data-residency rules can make a site mandatory.
Chip Mix	The largest GPUs and TPU pods (GB200/GB300, TPU v5p, Trainium 4), HBM-memory-bound and new-generation only. Frontier runs can't tolerate slower parts, so the newest silicon is bought at almost any price.	Smaller and older chips work fine (H100/H200, B200, TPU v5e/Trillium, RTX PRO 6000). That extends useful chip life roughly 2x – the older-chip arbitrage that defines inference unit economics.

The Edge Frontier: Emerging Markets Ready to Leapfrog



Maniacal focus has been on the Super campuses for LLMs and other AI models.

What happened in 2025 and will continue in 2026:

Fiber and Edge nodes will come back in vogue

Data center solutions that are close to the customers, scalable to the needs and agile enough to support varying capacity requirements

Why the Edge will matter

Performance, customer experience, network, security and flexibility

Where is the Edge going to be located

Wherever you need to connect to your customers

**AI/Cloud regions
Availability Zone (AZ)**



**Global reach
10-100+ MW
supports:**

- Cloud
- Webscale
- XaaS
- Global AI platforms

**AI extension
Local Zones (LZ)**



**Local reach
1-10 MW supports:**

- Content
- Networks
- Gaming
- Hybrid

**Cloud micro Edge
Wavelength/Edge Zones**



**HyperLocal
<10 kW–1 MW supports:**

- IoT
- Autonomous vehicles
- Smart City
- Agents

Empower YOUR Edge

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A FEW WARNING SIGNS

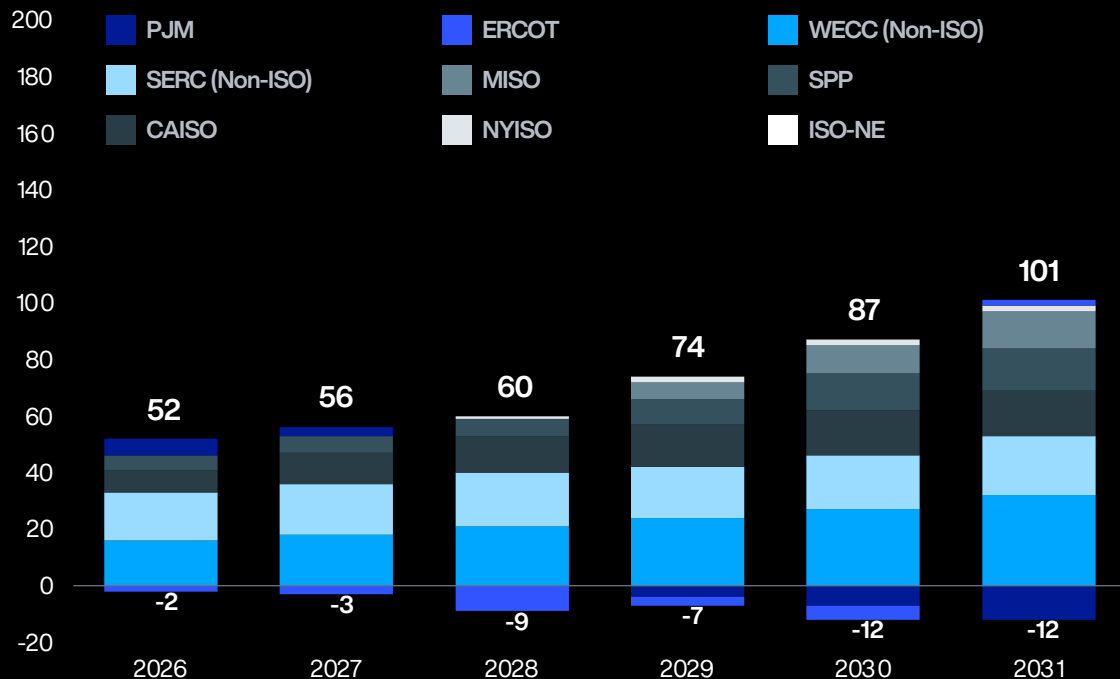
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Pre-Data Center Headroom Is Expanding in Most Regions but a Mismatch Between Supply and Demand Creates a Shortfall of Reliable Supply (RML Preserving)



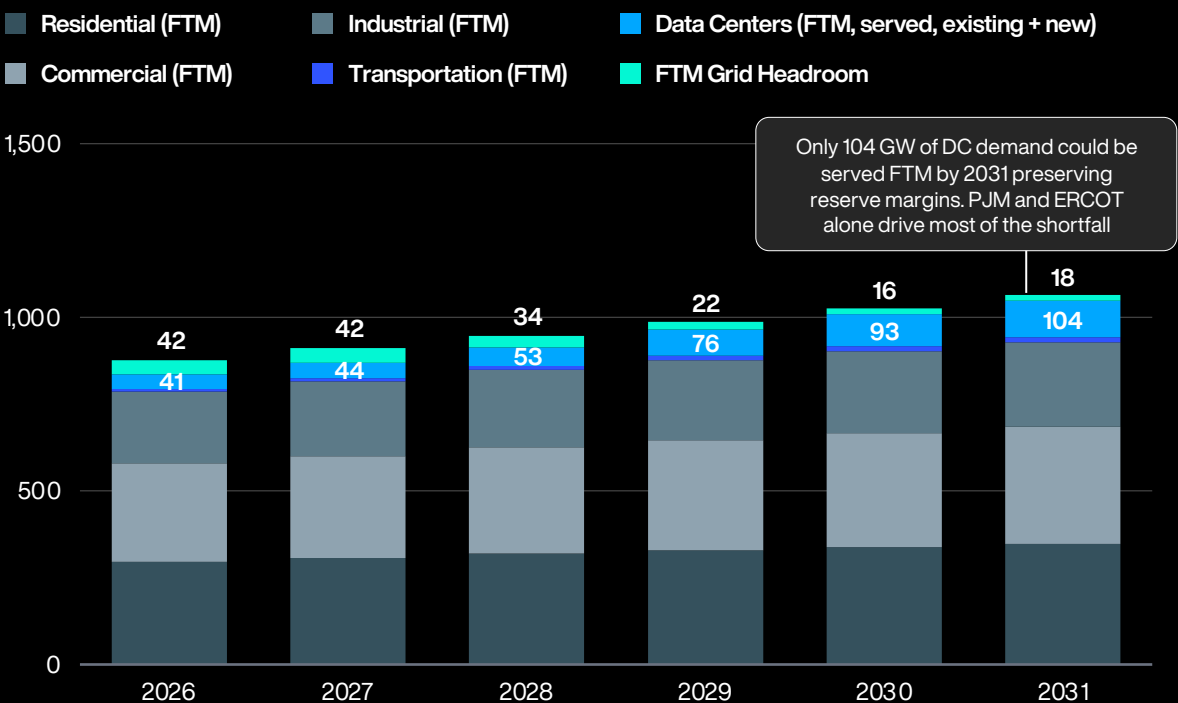
Pre-New Data Center Headroom Grows to ~90 GW by 2031

Pre Data Center Demand Headroom by ISO/RTO (GW, ELCC, RML, and Trans. adjusted)



But Only a Share of DC Demand Can Be Served FTM

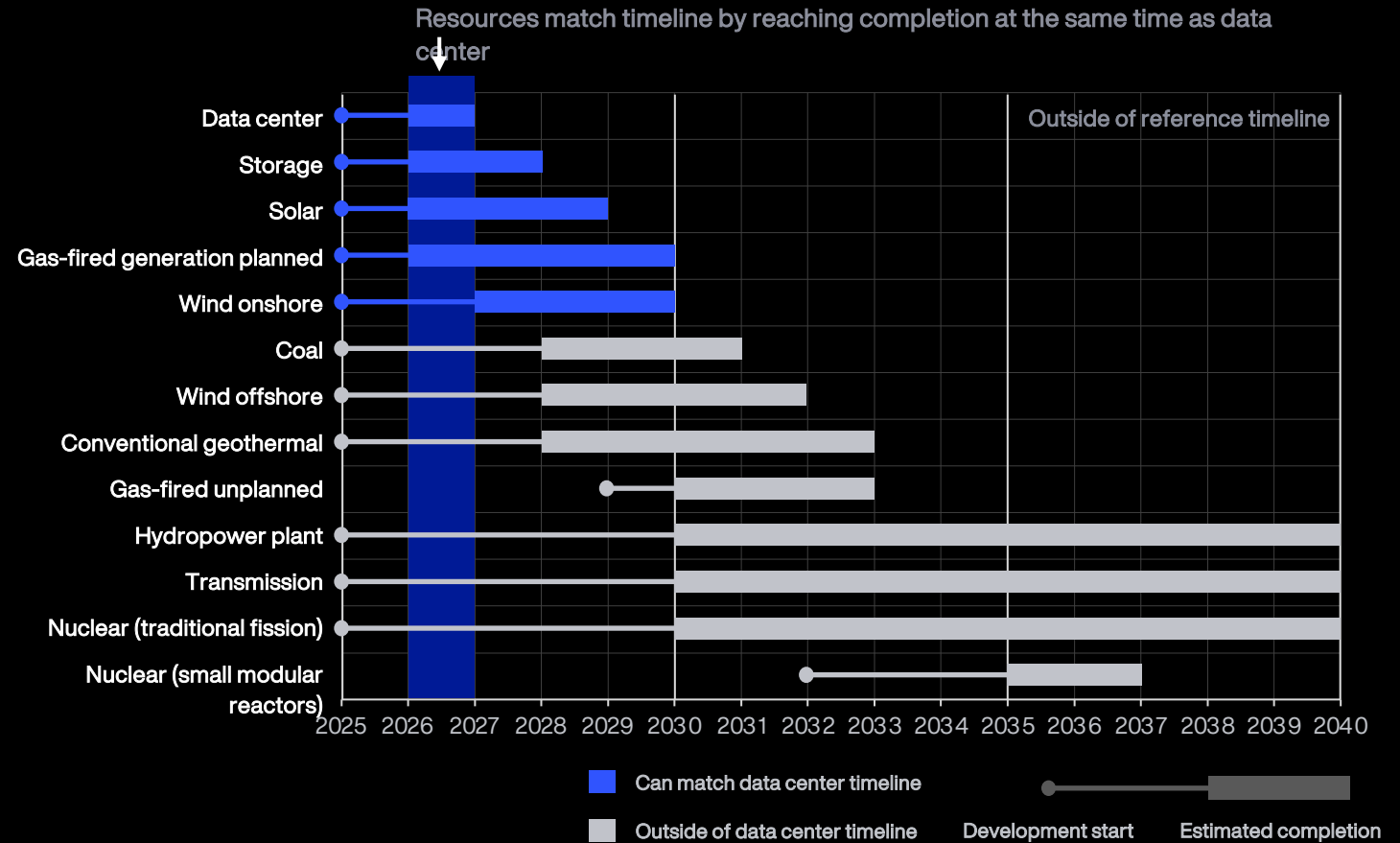
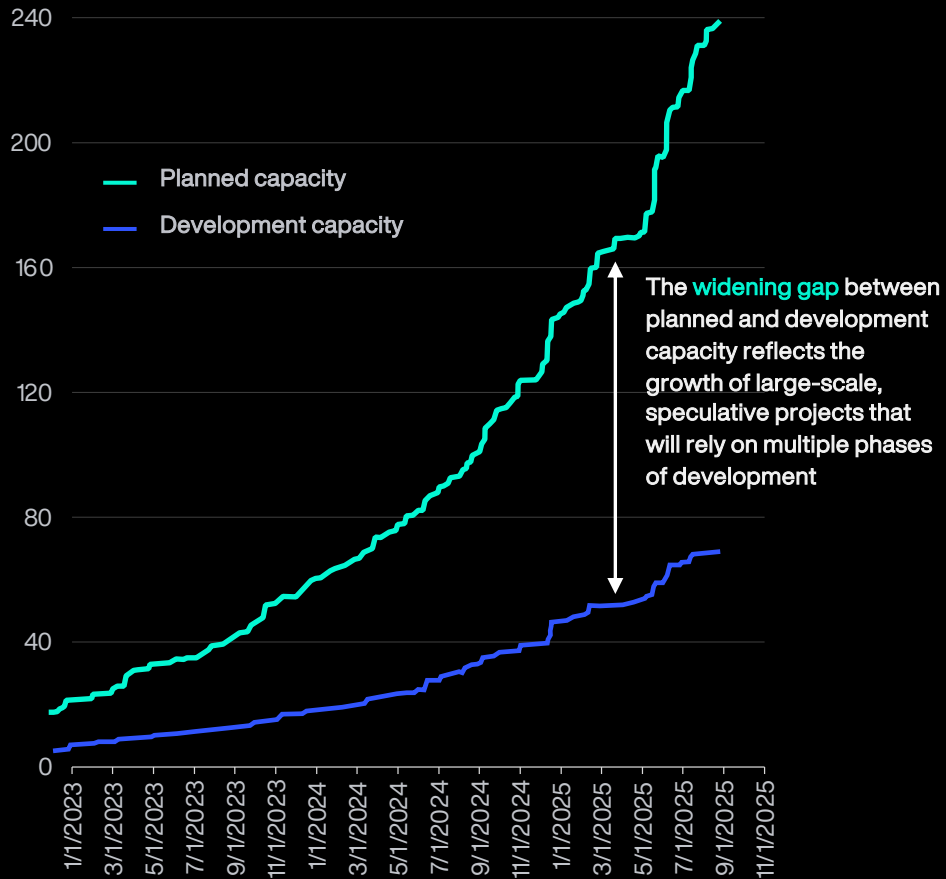
GW, ELCC & On-Peak Demand (all ISOs/RTOs)



Note: Covers all 9 ISOs/RTOs on a stock basis. GW figures are on-peak/ELCC, adjusted for transmission constraints and each ISO's NERC Reference Margin Level, held static across all years; NERC's published levels rise for several regions by 2030. This view excludes behind-the-meter supply, so unserved volumes are gross of BTM. Tracked capacity spans operating, under-construction and announced projects; announced volumes are not contracted.

Source: Bain US Electricity Constraints Model (August 2026); Aterio US data center inventory (2026 extract); NERC 2025 LTRA.

The Timeline Gap: “Old Economy” Power vs. “Tech Economy” Speed



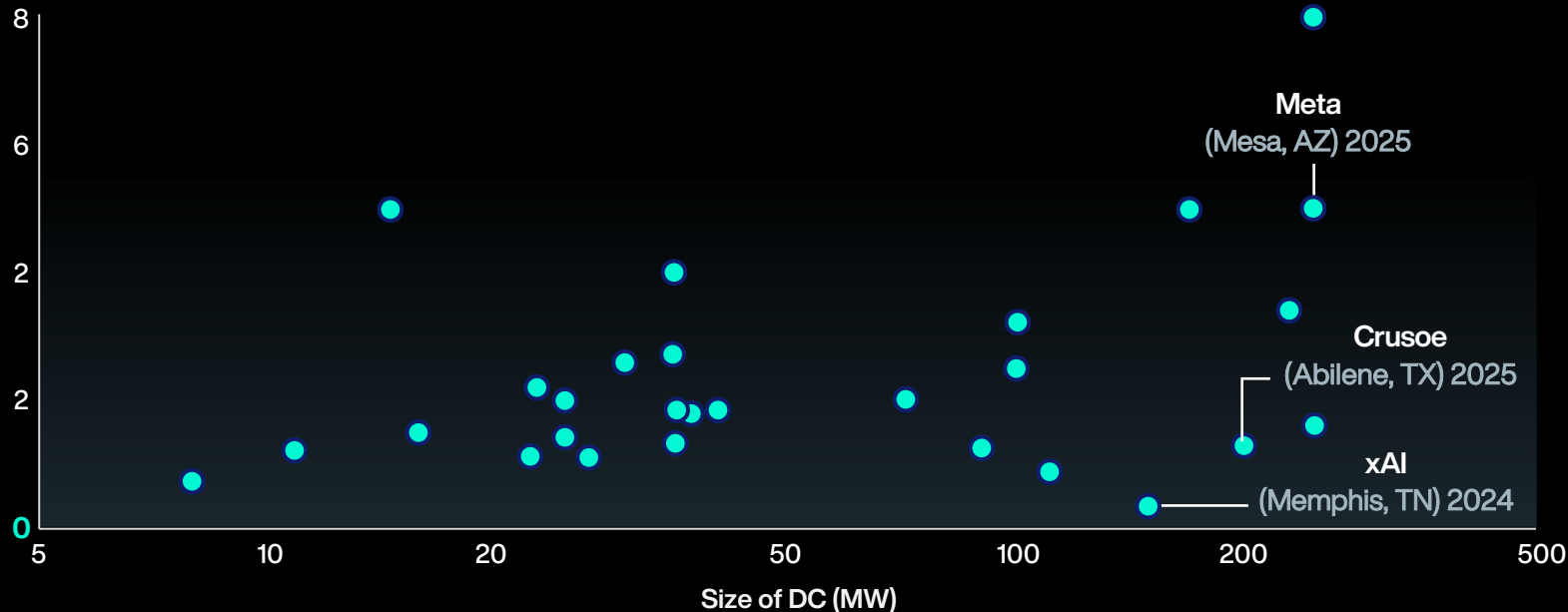
Source: Deloitte analysis of data from International Energy Agency, Brattle, and Energy Innovation reports.

Data Centers Are Being Planned With Compressed Delivery Schedules, but It Remains Uncertain Whether Such Rapid Timelines Are Achievable



Completed and planned DCs by size and construction timeline

Construction timeline (# of years from ground break to construction complete)



In addition to construction timeline, requires ~1+ year of pre-build (site selection, design) & 4+ months of operational testing

Commentary

- Planned data centers are getting much larger, with several 500 MW to 2 GW projects aiming for record-fast completion timelines of just two to three years
- These targets are ambitious given ongoing supply chain, labor constraints, etc. so actual delivery times may end up longer than planned
- The industry is entering new territory in scale and speed, and it remains to be seen whether these accelerated timelines are achievable at full capacity

Note: 1) Crusoe (Abilene, TX) - Phased project expanding from ~200 MW in 2025 to ~1.2 GW expected by 2028; 2) xAI (Memphis, TN) - Phased project expanding from ~150 MW in 2024 to ~1.2 GW expected by 2026

Source: Jefferies; Bain analysis; Lit. search

The Bottleneck Stack Extends Beyond the Data Center...

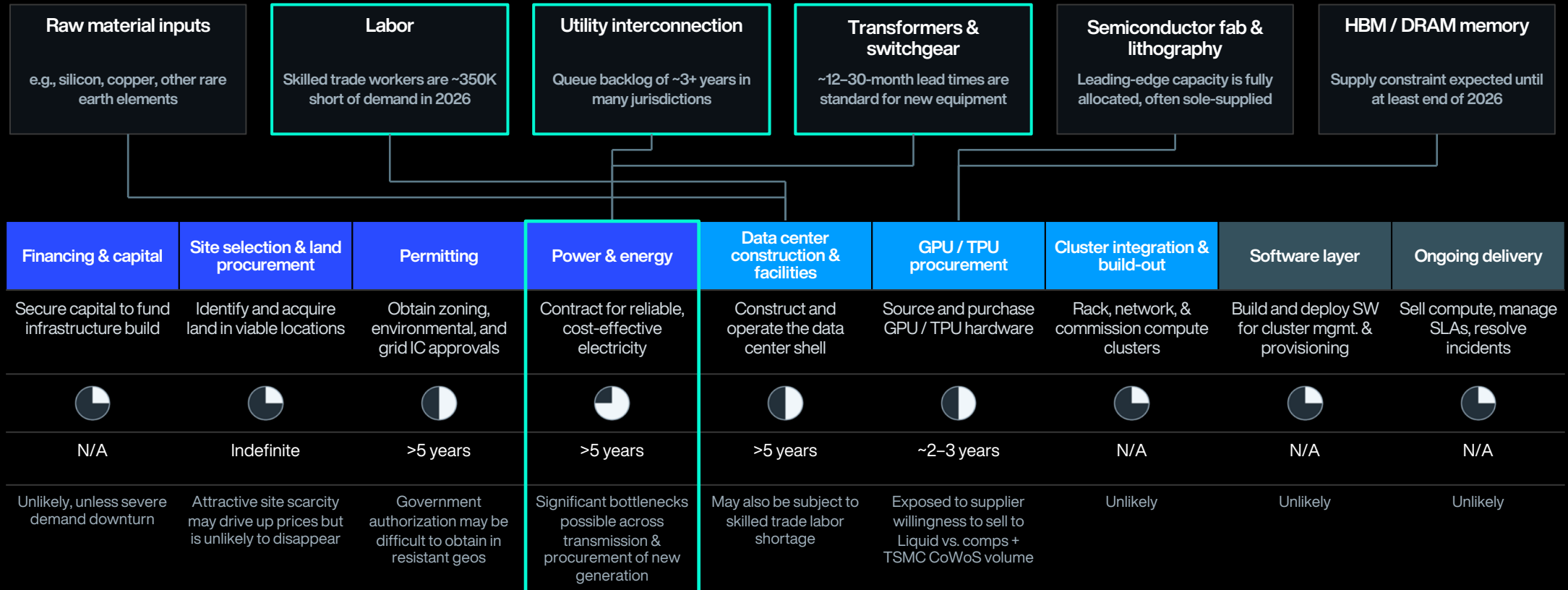


Power and its upstream enablers are the binding constraints

Upstream supply chain & key infrastructure enablers

Low
 High severity
 Likely constraint

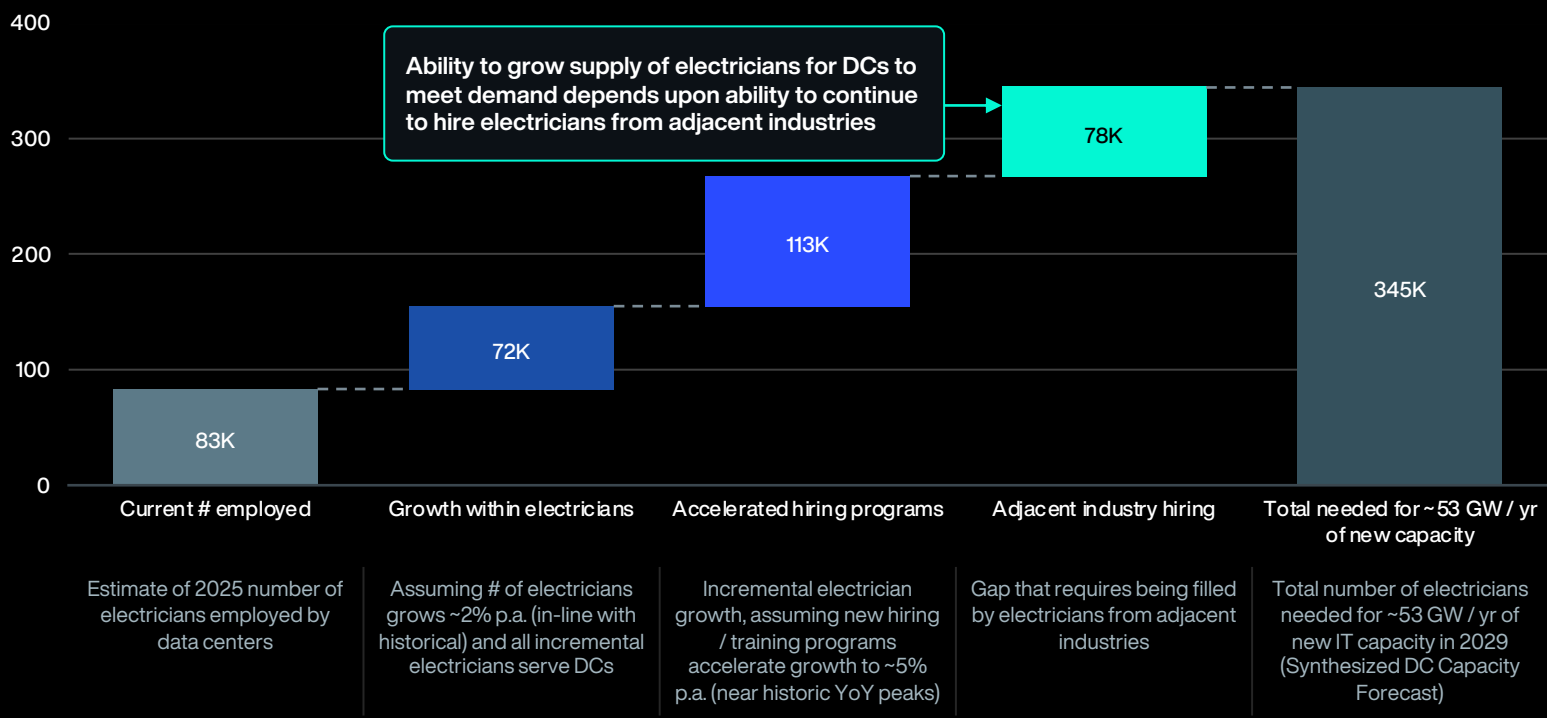
End-to-end AI infrastructure supply chain



Labor Supply | Electrician Labor Constraints May Impact Capacity in the Outer Years and Will Require a Meaningful Influx From Adjacent Specialties

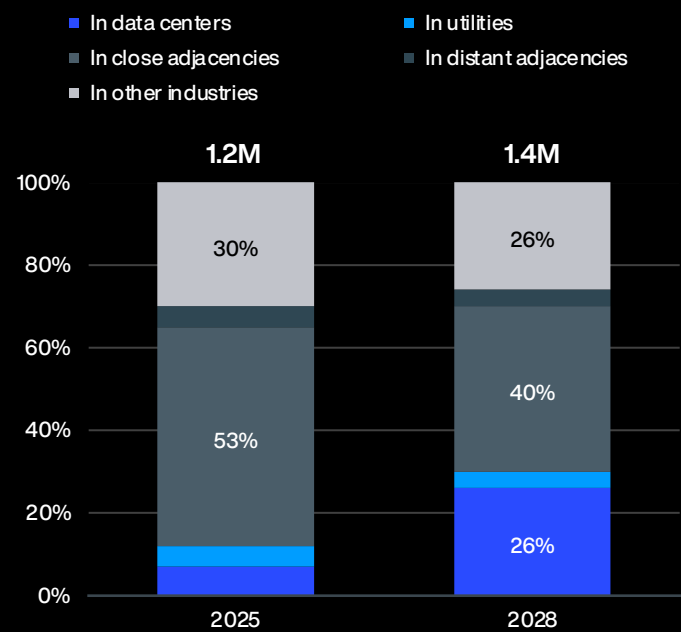


Electricians used by data centers may need to approach ~350K by 2028 to serve 2029 data centers



DC electricians would need to grow to ~25% of total electricians

Percent of estimated US electrical workforce available for DCs (% of electrical workers)



Note: Close adjacencies are the following NAICS titles in BLS: electric power generation, transmission & distribution, nonresidential building construction, other heavy and civil engineering construction, foundation, structure, and building exterior contractors, building equipment contractors, building finishing contractors, and other specialty trade contractors

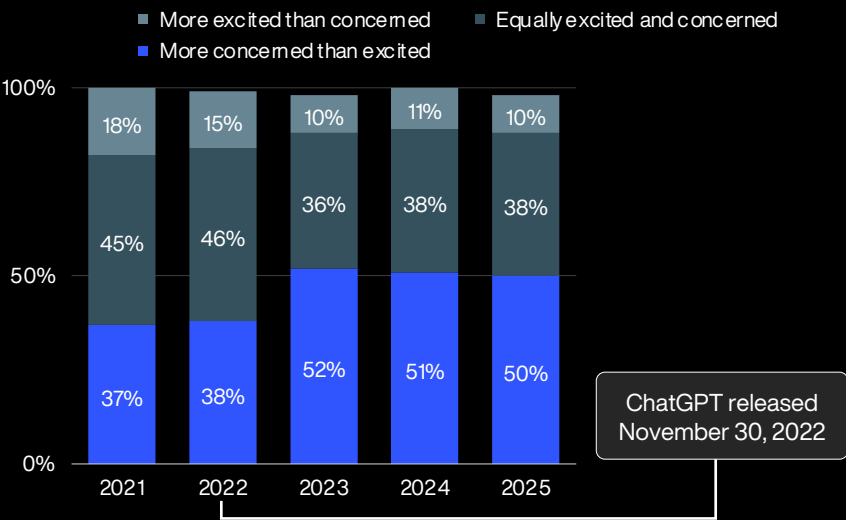
Source: Aterio; SemiAnalysis; BLS; FRED

Public Sentiment on AI Is Broadly Negative, With Expectations That It Will Cost Jobs and Weaken Critical Thinking Skills



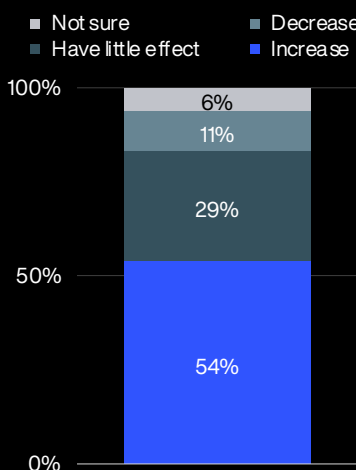
50% of Americans are more concerned than excited about AI

% of US adults who say the increased use of artificial intelligence in daily life makes them feel...



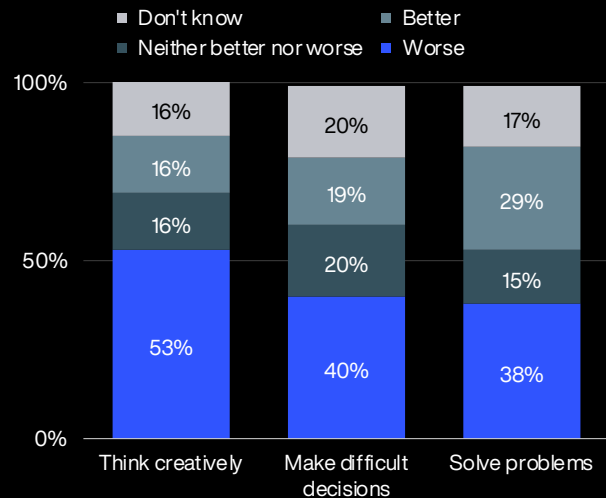
A majority of voters think AI is likely to increase unemployment rates

AI will _____ [on] the unemployment rate



Over half say AI will worsen people’s ability to think creatively

% of U.S. adults who say the increased use of artificial intelligence in society will make people’s ability to do each of the following...



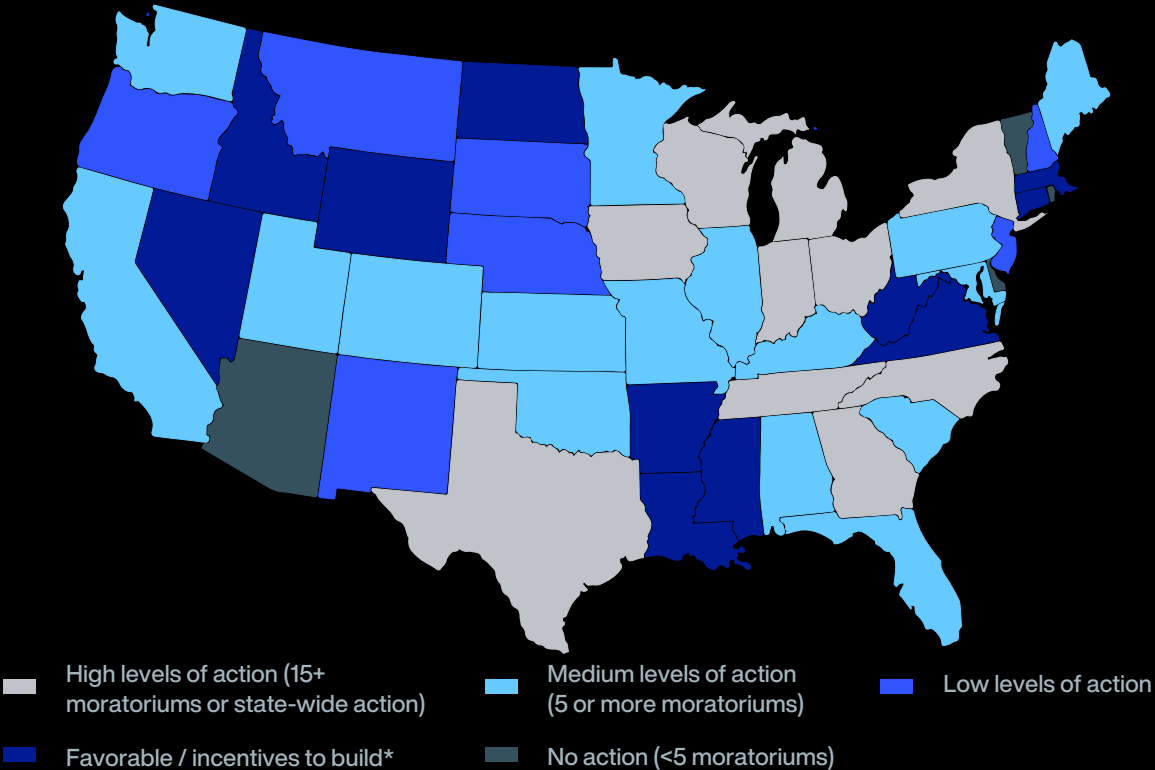
Commentary

- Concern has overtaken excitement and is still rising, the share of Americans more concerned than excited grew from 37% in 2021 to 50% in 2025, while excitement nearly halved; the trend shows no signs of stabilizing
- Job loss is the most concrete fear: 54% expect AI to raise unemployment vs. just 11% who expect it to fall, a 5:1 ratio that signals broad economic anxiety, not just tech-sector worry
- The anxiety extends beyond jobs to human capability itself, majorities say AI will worsen people's ability to think creatively (53%) and make difficult decisions (40%), suggesting opposition is rooted in something deeper than near-term economic disruption

Few States Have Implemented Broad Moratoriums, but Local Governments Are Exercising Their Authority to Impose Local Bans in Most States



Only two states have enacted a statewide ban, 8 states have high levels of moratorium activity



However, even states actively courting data centers have seen some local bans take hold

- High levels of action (10 states, 253 local moratoriums):** Active moratoriums are mostly local (190 towns/cities, 145 counties) and not statewide apart from New York and Texas
 - Texas halted all data center approvals for data centers going through ERCOT interconnection process until audits are completed, New York imposed a statewide moratorium of up to one year on the buildout of new data centers with capacity > 50MW
- Medium levels of action (16 states, 144 local moratoriums):** Restriction is meaningful but less saturated (avg. ~9), versus the dozens seen in High-action states
 - Oklahoma City's emergency ordinance halts new applications through Dec 31, 2026
- Low levels of action (7 states, 12 local moratoriums):** Very few local bans in place with a few proposed ordinances waiting discussion in the houses
- Favorable / incentives to build (11 states with incentives, 19 local moratoriums)**
 - Even within favorable states, individual counties retain authority; several Utah counties have enacted their own bans, meaning state-level support does not guarantee frictionless development

Note: Hawaii and Alaska not represented on the map; Excludes Tribal moratoriums, States with favorable policy and <5 moratoriums have been classified as favorable
Source: Lit search

Community Opposition Is Professionalizing Across Key Markets, Increasing the Importance of Early, Credible Local Engagement

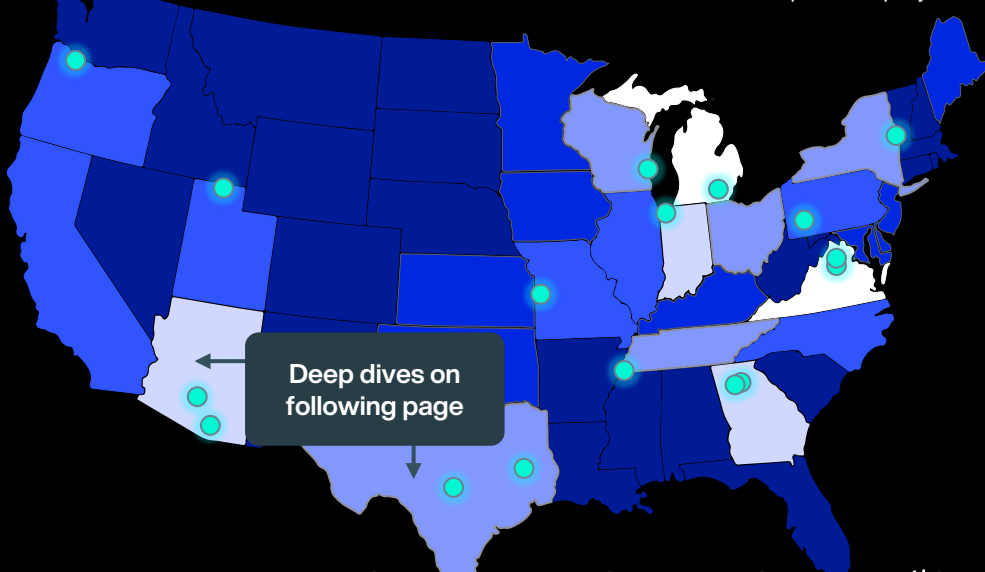


Opposition is heaviest where data center density is highest, but spreading fast into new markets

Opposition intensity:

■ None / minimal ■ Low (1–2 incidents) ■ Medium (3–5 incidents)
■ High (5–10 incidents) ■ Very high (10+ / major campaigns) ● Notable protest / project blocked

Illustrative



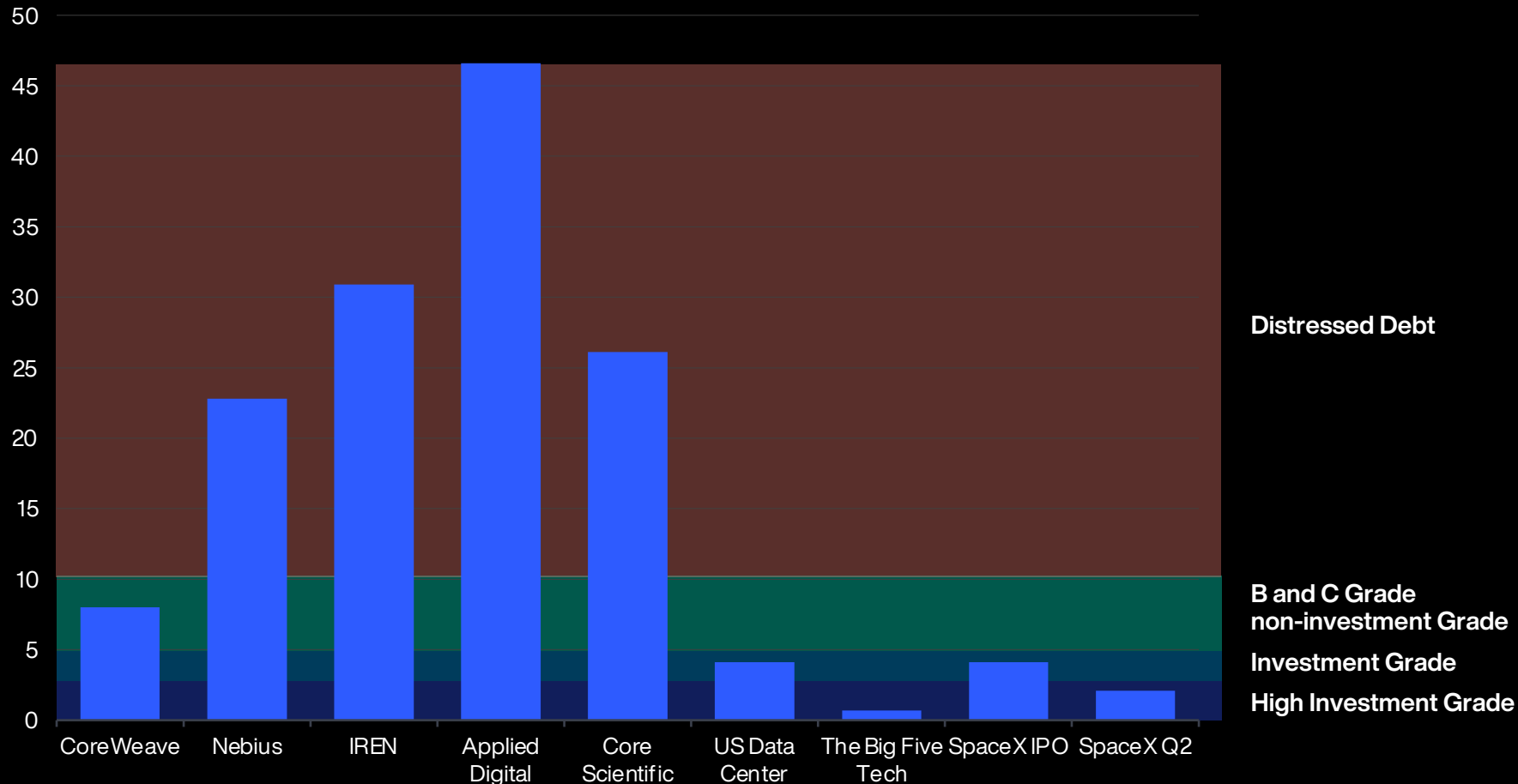
Directional — compiled from Wikipedia Opposition to AI Data Centers, Data Center Watch (\$64B report, Q2 2025), Introl, Project Censored, Planet Detroit, TechPolicy Press, CNN, The Spectator, Common Dreams. Intensity reflects documented protests, project rejections, and active opposition groups; not a precise count. Sources cover May 2024–May 2026.

What started as isolated NIMBYism is becoming an organized, replicable playbook

- Virginia, Michigan, Georgia, and Indiana are the four most active hotspots; each hosts major hyperscale concentrations or fast-growing pipelines
 - **Virginia:** multiple named citizen groups running coordinated legal and electoral campaigns, successfully blocking or delaying billions in projects
 - **Michigan:** 6-city coordinated rally (Apr '26), \$7B project stalled, and a ballot initiative on utility donations polling at 81% support
 - **Georgia and Indiana:** flagged by Data Center Watch as states where groups are most explicitly sharing tactics, turning local opposition into a networked movement
- **Grievances are consistent across all hotspots:** water use, electricity cost increases, noise, and a weak local jobs argument
- **Opposition is now bipartisan:** rural conservative communities are fighting DCs on water and grid grounds just as aggressively as progressive communities
- **The movement is professionalizing:** lawsuits, candidate slates in local elections, and ballot measures are replacing protest signs
 - Port Washington, WI's referendum was the first community veto of its kind and organizers have explicitly called it a replicable model

Execution Risk Becomes Financial Risk

On Normalized Leverage Metrics, Many Neoclouds Would Be Classified as Highly Distressed Assets



Why are equity investors investing:

- Debt is argued to be project finance and non-recourse
- Backlog of signed offtake will accelerate EBITDA lowering ratios

Why short sellers are clamoring:

- Segment is highly vulnerable to delivery of power and compute
- Price compression on single source contracts could cause compression of margins

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FINAL THOUGHTS

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AI Infrastructure Is Real — But the Winners Will Be Determined by Execution, Not Announcements



01 Demand Is Real and Structural

- AI has reset expectations for compute, power density, campus scale, and long-term data center demand.

02 The Bottleneck Is Shifting From Demand to Delivery

- Power availability, interconnection timelines, equipment lead times, labor, and permitting are now gating factors.

03 Infrastructure Design Will Fragment by Workload

- Training, inference, and edge use cases will require different approaches to location, latency, redundancy, density, and energy sourcing.

04 Public Permission Will Matter More

- Communities will support projects that show concrete local benefits — jobs, tax base, grid investment, reliability, and transparency.

05 Financial Discipline Will Separate Winners From Casualties

- The ecosystem can be healthy overall while still producing failures among overlevered or underutilized players.



Will This Team Lead Us to a
Prosperous Tomorrow...

Will This Become Reality



OR



